Comparisons of Job Characteristics

Focus Occupation: Environmental Scientists and Specialists, Including Health (19-2041)
Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 90

Focus Occupation: Environmental Scientists and Specialists, Including Health (19-2041)
Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Computers and Electronics	8.4	13.6	13.3	0	Current knowledge level may be sufficient
Chemistry	4.8	13.2	14.9	>	Current knowledge level is likely sufficient
Biology	3.7	11.4	14.8	>>	Current knowledge level is likely more than sufficient
Public Safety and Security	6.9	11.1	8.9	<	Expanded education and/or training may be required
Physics	4.3	9.9	10.5	0	Current knowledge level may be sufficient
Law and Government	5.9	9.8	13.5	>>	Current knowledge level is likely more than sufficient
Geography	3.9	9.7	12.7	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 85

Focus Occupation: Environmental Scientists and Specialists, Including Health (19-2041)
Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Science	4.5	10.3	15.7	>>	Skill level is likely more than sufficient
Mathematics	6.2	9.2	12.2	>>	Skill level is likely more than sufficient
Operations Analysis	5.0	7.9	9.3	>	Skill level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 92

Focus Occupation: Environmental Scientists and Specialists, Including Health (19-2041)
Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Written Expression	9.8	12.9	14.4	>	Current ability level is likely sufficient
Near Vision	11.1	12.8	12.3	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	9.1	12.2	>>	Current ability level is likely more than sufficient
Number Facility	6.3	9.0	11.9	>>	Current ability level is likely more than sufficient
Rate Control	3.8	6.7	4.2	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 100

Focus Occupation: Environmental Scientists and Specialists, Including Health (19-2041)
Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Work Activities	Exclusivity of Activity
Adhere to safety procedures	12
Advise clients or customers	19
Advise enforcement personnel on environmental standards	99
Advise governmental or industrial personnel	28
Analyze biological research, test, or analysis data	70
Analyze chemical experimental, test, or analysis data or findings	69
Analyze ecosystem data	69
Analyze scientific research data or investigative findings	27
Collect geographic or physical data	81
Collect samples for testing	58
Collect scientific or technical data	30
Collect statistical data	47
Communicate technical information	4
Compile numerical or statistical data	38
Conduct analyses or tests of organic compounds	71
Conduct analyses to determine physical properties of materials	80
Conduct field research or investigative studies	52
Conduct laboratory research or experiments	57

Conduct standardized qualitative laboratory analyses	62
Conduct standardized quantitative laboratory analyses	62
Confer with scientists	54
Create mathematical or statistical diagrams or charts	43
Determine negligence or violation of laws or regulations	92
Determine the effects of pollution	99
Develop or maintain databases	30
Develop plans for programs or projects	31
Develop policies, procedures, methods, or standards	21
Develop tables depicting data	33
Direct and coordinate activities of workers or staff	3
Direct implementation of new procedures, policies, or programs	60
Enforce laws, ordinances, or regulations	66
Ensure compliance with government regulations	76
Examine biological or other material specimens under microscope	73
Explain complex mathematical information	30
Explain rules, policies or regulations	48
Follow infectious materials procedures	52
Follow microbiology procedures	74
Follow safe waste disposal procedures	50
Identify properties of soil or water samples	85
Inspect facilities or equipment for regulatory compliance	51
Make decisions	24
Measure air quality	99
Monitor atmospheric or meteorological processes	89
Perform safety inspections in industrial, manufacturing or repair setting	32
Perform tests to assess compliance with standards	99
Prepare environmental impact or related environmental reports	81
Prepare reports	8
Prepare safety reports	60
Prepare sample for laboratory testing, analysis, or microscopy	74
Prepare technical reports or related documentation	22
Recognize public safety hazards	68
Recommend action to ensure compliance	73
Record test results, test procedures, or inspection data	48
Test air quality, noise, temperature, or radiation	82
Test air to detect toxic gases	92
Test materials or solutions	73
Understand properties of gases or liquids	78
Use biological testing instruments	73
Use chemical processing emergency procedures	84
Use chemical testing or analysis procedures	54
Use computers to enter, access or retrieve data	3
Use government regulations	44
Use hazardous disposal techniques	80
Use hazardous materials information	35
Use health or sanitation standards	62
Use interpersonal communication techniques	10

Use interviewing procedures	23
Use knowledge of environmental laws and regulations	76
Use knowledge of investigation techniques	16
Use knowledge of materials testing procedures	70
Use laboratory equipment	60
Use mathematical or statistical methods to identify or analyze problems	30
Use microscope	71
Use physical science research techniques	68
Use pollution control techniques	62
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Environmental Scientists and Specialists, Including Health (19-2041)
Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Tools and Technologies	Exclusivity
Business function specific software	1
Cameras	2
Chemical evaluation instruments and supplies	10
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Content management software	6
Data management and query software	1
Electrical measuring and testing equipment	7
Electrochemical measuring instruments and accessories	9
Fluid mechanics equipment	11
Gas analyzers and monitors	10
Humidity and moisture measuring instruments	15
Hydrological instruments	31
Industry specific software	1
Information exchange software	1
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Liquid and solid and elemental analyzers	19
Meteorological instruments	16
Network applications software	1

Sampling equipment	12
Soil measuring equipment	20
Sound generating and measuring equipment	19
Spectroscopic equipment	10
Water treatment and supply equipment	21

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.